

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1           **Claim 1 (previously presented):** A network apparatus for communicating multi-media  
2         information by mobile terminals, comprising:  
3                 an Internet interface means for establishing an interface with the Internet;  
4                 a mobile interface means for establishing an interface with a mobile network;  
5                 a protocol processing means for applying a protocol process to information which is  
6         processed by the Internet interface means and the mobile interface means;  
7                 an image information edit processing means for editing a display characteristic of image  
8         information which is extracted by the protocol processing means into image information suitable  
9         for a mobile communication with a mobile terminal by thinning the image information, said  
10        display characteristic being at least one of a screen size of the image information and a color  
11        depth of the image information;  
12                 a storage unit for storing the image information which is edited by the image information  
13        edit processing means;  
14                 a storage unit controlling means for controlling to store the image information in the  
15        storage unit and to read the stored image information; and  
16                 a transmission timing control processing means for informing the storage unit controlling  
17        means of a transmission timing so as to transmit the image information continuously every unit  
18        time.

1           **Claim 2 (previously presented):** A network apparatus according to claim 1, wherein  
2         the image information which is transmitted/received in respective interfaces of said Internet  
3         interface means, said mobile interface means, said protocol processing means, said image

4 information edit processing means, and said storage unit controlling means is communicated in  
5 a cellulated format.

1                   **Claim 3 (previously presented):** A network apparatus according to claim 1, wherein  
2        said mobile interface means includes:

3                   a mobile protocol reception processing means for receiving information from the mobile  
4        network and then informing the protocol processing means; and

5                   a mobile protocol transmission processing means for transmitting information from the  
6        protocol processing means and information from the storage unit controlling means to the mobile  
7        network via a transmission process.

1                   **Claim 4 (original):** A network apparatus according to claim 1, wherein said Internet  
2        interface means includes:

3                   an Internet protocol reception processing means for performing a communication process  
4        of the information received from the Internet and then informing the protocol processing means;  
5        and

6                   an Internet protocol transmission processing means for transmitting the information  
7        received from the protocol processing means to the Internet.

1                   **Claim 5 (original):** A network apparatus according to claim 4, wherein said Internet  
2        interface means includes an interface for cellulating the information to communicate  
3        communication information and the image information when the Internet protocol reception  
4        processing means and the Internet protocol transmission processing means communicate with  
5        the protocol processing means.

1                   **Claim 6 (original):** A network apparatus according to claim 1, wherein said protocol

2 processing means includes:

3           an Internet protocol address analysis processing means for analyzing that the information

4         from the Internet interface means correspond to either of communication information and the

5         image information;

6           an image information protocol processing means for executing a protocol process of the

7         image information from the Internet protocol address analysis processing means;

8           a data reproduction processing means for processing the image information which are

9         protocol-processed by the image information protocol processing means to reproduce original

10        information; and

11           a communication network protocol processing means for protocol-processing the

12         information supplied to the Internet and the mobile network.

1           **Claim 7 (original):** A network apparatus according to claim 1, wherein said image

2         information edit processing means includes:

3           a reproduced data storage unit for storing the image information reproduced by the

4         protocol processing means;

5           a received data managing means for managing writing/reading of reproduced data

6         into/from the reproduced data storage unit; and

7           a reproduced data editing means for editing the reproduced data read from the

8         reproduced data storage unit into a format which is suitable for the mobile terminal.

1           **Claim 8 (original):** A network apparatus according to claim 3, wherein said mobile

2         protocol transmission processing means includes:

3           an asynchronous information processing means for processing asynchronous

4         communication information from the protocol processing means;

5           a synchronous information processing means for processing synchronous image

6 information form the storage unit controlling means;  
7 a transmission buffer for transmitting the information to the mobile network; and  
8 an information write controlling means for controlling to write the image information  
9 from the synchronous information processing means into the transmission buffer prior to  
10 communication information form the asynchronous information processing means,  
11 whereby the image information processed by the synchronous information processing  
12 means are transmitted to the mobile network prior to the communication information so as to  
13 allow continuous reproduction of the image information.

1 **Claim 9 (original):** A network apparatus according to claim 1, wherein said storage  
2 unit controlling means includes:  
3 an edit data split processing means for splitting edited information edited by the image  
4 information edit processing means into cellulated information to write them into the storage unit;  
5 a storage unit managing means for managing reading process/ writing process from/into  
6 the storage unit;  
7 a data storage processing means for instructing the storage unit managing means of  
8 writing of split data edited by the edit data split processing means; and  
9 a data read processing means for instructing the storage unit managing means of reading  
10 in response to a reading timing instruction issued from the mobile interface means.

**Claim 10 (cancelled)**

1 **Claim 11 (previously presented):** A network apparatus for communicating image  
2 information between mobile terminals comprising:  
3 a mobile interface means for establishing an interface with a mobile network in  
4 communication with the mobile network;

5               a protocol processing means for processing protocol of image information from one of  
6       the mobile terminals;  
7               an image information edit processing means for editing a display characteristic of the  
8       image information into edited information suitable for said one of the mobile terminals, said  
9       display characteristic being at least one of a screen size of the image information and a color  
10      depth of the image information;  
11         a storage unit for storing the edited information; and  
12         a storage unit controlling means for controlling to store the edited information into the  
13      storage unit and to read stored edited information.

**Claim 12 (cancelled)**

1               **Claim 13 (previously presented):** A network apparatus comprising:  
2               a mobile interface means for establishing an interface with a mobile network in  
3       communication with the mobile network;  
4               a protocol processing means for processing protocol of image information from the  
5       mobile terminal;  
6               an image information conversion processing means for converting the image information  
7       into a common image information format;  
8               a storage unit for storing converted image information;  
9               a storage unit controlling means for controlling to store the image information into the  
10      storage unit and to read stored image information; and  
11         an image information custom processing means for editing a display characteristic of the  
12       image information read from the storage unit into the image information which is suitable for  
13       respective mobile terminals, said display characteristic being at least one of a screen size of the  
14      image information and a color depth of the image information;

15               wherein the image information can be communicated between different types of mobile  
16               terminals.

1               **Claim 14 (previously presented):** A network apparatus comprising:  
2               a mobile interface means for establishing an interface with a mobile network in  
3               communication with the mobile network;  
4               a protocol processing means for processing protocol of image information from the mobile  
5               terminal;  
6               a storage unit for storing the image information in a common image information format;  
7               a storage unit controlling means for controlling to store the image information into the  
8               storage unit and to read stored image information; and  
9               an image information custom processing means for editing a display characteristic of the  
10               image information read from the storage unit into the image information which is suitable for  
11               respective mobile terminals, said display characteristic being at least one of a screen size of the  
12               image information and a color depth of the image information;  
13               wherein the image information read from the storage unit are supplied constantly to the  
14               mobile network to deliver broadcast.

1               **Claim 15 (previously presented):** A network apparatus for communicating multi-media  
2               information by mobile terminals, comprising:  
3               an Internet interface means for establishing an interface with the Internet;  
4               a mobile interface means for establishing an interface with a mobile network;  
5               a protocol processing means for processing protocol of information which is processed by  
6               the Internet interface means and the mobile interface means;  
7               an image information conversion processing means for converting the image information  
8               extracted by the protocol processing means into a common image information format;

9           a storage unit for storing the image information converted by the image information  
10          conversion processing means;  
11          a storage unit controlling means for controlling to store the image information into the  
12          storage unit and to read stored image information; and  
13          an image information custom processing means for editing and processing a display  
14          characteristic of the image information read by the storage unit controlling means to perform a  
15          mobile communication, said display characteristic being at least one of a screen size of the image  
16          information and a color depth of the image information.

1           **Claim 16 (previously presented):** A network communication method applied to a  
2          network apparatus in a network for communicating multi-media information by mobile terminals,  
3          comprising the steps of:

4           interface-processing information between the Internet and the network apparatus;  
5           interface-processing information between a mobile network and the network apparatus;  
6           protocol-processing the information which is interface-processed;  
7           edit-processing a display characteristic of the image information which is extracted by  
8          protocol process to perform a mobile communication, said display characteristic being at least  
9          one of a screen size of the image information and a color depth of the image information;  
10          storing the image information which is subjected to edit process; and  
11          controlling storing of the image information and reading of stored image information.

1           **Claim 17 (previously presented):** A network communication method according to  
2          claim 16, wherein the image information which is transmitted/received is communicated in a  
3          cellulated format in an interface with the Internet interface means, an interface with the mobile  
4          interface means, an interface when the information which is interface-processed is protocol-  
5          processed, an interface when the image information extracted via the protocol process is edit-

6        processed, and an interface when the image information is stored and stored image information  
7        is read.

1           **Claim 18 (original):** A network communication method according to claim 16, wherein  
2        the step of interface-processing the information between the mobile network and the network  
3        apparatus includes the steps of:

4            receiving the information from the mobile network and then informing the protocol  
5        processing means;

6            transmitting the information from the protocol processing means and the information  
7        from the storage unit controlling means, which controls storage of the image information, via  
8        transmission process to the mobile network; and

9            informing the storage unit controlling means, which controls storage and reading of the  
10        image information, of a transmission timing so as to transmit the image information continuously  
11        ever unit time,

12            whereby continuous reproduction of the image information for the mobile network can  
13        be achieved based on such information of the transmission timing to the storage unit controlling  
14        means.

1           **Claim 19 (original):** A network communication method according to claim 16, wherein  
2        the step of interface-processing between the Internet and the network apparatus, includes the  
3        steps of:

4            performing a communication process of the information received from the Internet and  
5        then informing the protocol processing means; and

6            transmitting the information received from the protocol processing means to the Internet.

1           **Claim 20 (previously presented):** A network communication method according to

2 claim 19, wherein the step of interface-processing between the Internet and the network  
3 apparatus, includes the steps of:

4 cellulating communication information and the image information which is  
5 communicated between the protocol processing means and the Internet, when the information  
6 received from the Internet is communicated and transmitted to the protocol processing means and  
7 also the information received from the protocol processing means is transmitted to the Internet.

1 **Claim 21 (previously presented):** A network communication method according to  
2 claim 16, wherein the step of protocol-processing the information being interface-processed,  
3 includes the steps of:

4 determining that the information which are interface-processed correspond to either of  
5 communication information and the image information to the mobile network;  
6 protocol-processing analyzed image information;  
7 processing the image information which is protocol-processed to reproduce original  
8 information; and  
9 protocol-processing the information supplied to the Internet and the mobile network.

1 **Claim 22 (previously presented):** A network communication method according to  
2 claim 16, wherein the step of edit-processing the image information which is extracted by  
3 protocol process to perform a mobile communication, includes the steps of:

4 storing the image information reproduced by the protocol processing means;  
5 managing writing/reading of reproduced image information; and  
6 editing read reproduced data into a format which is suitable for mobile communication.

1 **Claim 23 (previously presented):** A network communication method according to  
2 claim 18, wherein the step of transmitting the information from the protocol processing means

3       and the information from the storage unit controlling means which controls storage of the image  
4       information via transmission process to the mobile network, includes the steps of:  
5               processing asynchronous communication information from the protocol processing  
6       means;  
7               processing synchronous image information from the storage unit controlling means;  
8               a transmission buffer for transmitting the information to the mobile network;  
9               storing processed synchronous image information to be transmitted prior to processed  
10      asynchronous communication information; and  
11               transmitting the processed synchronous image information to the mobile network;  
12               whereby the image information processed by the synchronous information processing  
13      means is transmitted to the mobile network prior to the communication information so as to  
14      allow continuous reproduction of the image information.

1               **Claim 24 (previously presented):** A network communication method according to  
2       claim 16, wherein the step of controlling storing of the image information and reading of stored  
3       image information, includes the steps of:  
4               splitting edited data which is obtained by editing the image information extracted by the  
5       protocol process to perform the mobile communication so as to store the edited data;  
6               processing storing and reading of edited data by the storage unit managing means;  
7               instructing the storage unit managing means to write edited split data; and  
8               instructing the storage unit managing means of reading in response to a reading timing  
9       instruction issued from the mobile interface means.

**Claim 25 (cancelled)**

1               **Claim 26 (previously presented):** A network communication method in

2 communication with a mobile network, comprising the steps of:  
3 interface-processing information between a network apparatus and the mobile network;  
4 protocol-processing information which is supplied from the mobile terminal and  
5 interface-processed;  
6 editing a display characteristic of the image information being protocol-processed into  
7 edited information suitable for the mobile terminal, said display characteristic being at least one  
8 of a screen size of the image information and a color depth of the image information;  
9 storing the edited information; and  
10 controlling storing and reading of the edited information;  
11 wherein the image information is communicated between the mobile terminals.

**Claim 27 (cancelled)**

1 **Claim 28 (previously presented):** A network communication method in  
2 communication with a mobile network, comprising the steps of:  
3 interface-processing information between a network apparatus and the mobile network;  
4 protocol-processing information which is supplied from the mobile terminal and  
5 interface-processed;  
6 converting plural types of image information formats into a common image information  
7 format;  
8 storing converted image information; and  
9 reading stored image information and then editing a display characteristic of the image  
10 information into the image information which is suitable for plural types of mobile terminals,  
11 said display characteristic being at least one of a screen size of the image information and a color  
12 depth of the image information;  
13 wherein the image information can be communicated between different types of mobile

14 terminals.

1           **Claim 29 (previously presented):** A network communication method in  
2 communication with a mobile network, comprising the steps of:

3           interface-processing information between a network apparatus and the mobile network;

4           protocol-processing information which is supplied from the mobile terminal and  
5 interface-processed;

6           providing a reading instruction and a reading timing to read stored image information  
7 in a common image information format;

8           editing a display characteristic of read image information into the image information  
9 which is suitable for respective mobile terminals, said display characteristic being at least one  
10 of a screen size of the image information and a color depth of the image information; and

11           broadcasting edited image information by supplying the edited information constantly  
12 to the mobile network.

1           **Claim 30 (previously presented):** A network communication method applied to a  
2 network apparatus in a network for communicating multi-media information by mobile terminals,  
3 comprising the steps of:

4           interface-processing information between the Internet and the network apparatus;

5           interface-processing information between a mobile network and the network apparatus;

6           protocol-processing the information which is interface-processed;

7           converting the image information extracted by the protocol process into a common image  
8 information format;

9           storing the image information which is converted into the common image information  
10 format; and

11           reading stored image information and then custom-processing a display characteristic

- 12        of the stored image information, said display characteristic being at least one of a screen size of
- 13        the image information and a color depth of the image information.